The Role of Paracentesis and Lavage in the Evaluation of Penetrating Torso Injuries

BECAUSE OF CONTINUED ADVANCES in surgical care, mandatory celiotomy has become the widely acceptable method of management for penetrating injuries of the torso. Utilizing this method, less than 5 percent of all stab wounds and only 10 percent to 15 percent of gunshot wounds of the abdomen are now lethal. As a result of this more aggressive surgical approach, a new problem, negative celiotomy, has occurred. Penetrating abdominal wounds without associated visceral injury have been reported in as many as 53 percent of all penetrating torso injuries managed under a policy of immediate mandatory exploration. Since negative celiotomy is associated with a significant mortality rate, postoperative morbidity and sizable cost, paracentesis and lavage are widely accepted as a valuable adjunct in the evaluation of these patients.

A satisfactory protocol using paracentesis and lavage for the evaluation of penetrating torso injuries is as follows:

- Immediate celiotomy is carried out in the presence of (1) evisceration, (2) distended or distending abdomen, (3) deteriorating vital signs, (4) roentgenographic demonstration of free air in the peritoneal cavity.
- If the above gives negative findings, paracentesis is done with a Trocath® placed through a stab wound just below the umbilicus. The technique is similar to that reported by Olsen. If blood is obtained (20 ml or more), celiotomy is carried out. If less than 20 ml of blood is present, the peritoneal cavity is lavaged with saline or lactated Ringer's solution, approximately 20 ml per kg of body weight to a maximum of 1,000 ml. Lavage is considered positive and celiotomy done if newsprint cannot be read through the intravenous tubing.
- If paracentesis and lavage results are negative, patients are observed in the hospital. No patient is observed unless paracentesis and lavage have been done.
- All gunshot wounds of the torso are initially evaluated in the operating room as to extent and depth. When injuries are suspected to be superficial and there are no clinical indications for immediate celiotomy, paracentesis and lavage are done.

The above policy has resulted in lowering the negative celiotomy rate to approximately 8 percent.

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Fiberoptic Colonoscopy

FIBEROPTIC COLONOSCOPY has gained acceptance as a valuable adjunct in the diagnosis and treatment of colonic diseases. Current instruments are technologic marvels that permit inspection, photography biopsy, lavage, polypectomy and retrieval of foreign bodies. Colonoscopy is no longer the province of a few pioneers; it is widely applied in the community. Several questions remain, however, about the indications for colonoscopy and the hazards of the procedure.

Broadly stated, colonoscopy should be done if colonic symptoms, signs or radiographic abnormalities need further clarification. Unexplained diarrhea, occult blood in the stool and equivocal findings on barium studies are among the valid indications for colonoscopy. On the other hand, should colonoscopy be done in patients with irritable colon syndrome, chronic constipation or vague chronic abdominal pain? The yield of organic disease in these patients is so low that colonoscopy for such slim indications probably is not justified.

The role of colonoscopy in the diagnosis and treatment of colonic neoplasms has not been clarified fully. Is every tiny radiolucent defect an indication for colonoscopy? Should colonoscopy be done in a patient with a rectal polyp but normal findings on barium enema? Should colonoscopy be done routinely at arbitrary intervals after neoplasms are removed endoscopically or surgically, or should it be done only if some other screening test result is abnormal? If so, which other test should be relied upon and at what intervals should it be done?

The morbidity of colonoscopy is reportedly 0.34 percent to 0.42 percent for diagnostic procedures and 1 percent to 2.32 percent for polypectomies. These complication rates were compiled by a relatively small number of colon-

oscopists who were interested in establishing the safety of the technique. Now that colonoscopy is being done by physicians and surgeons of varying interest, skill and experience, will the morbidity—and mortality—remain at acceptable levels?

These questions and many others must be answered before the proper place of this important advance is known. Colonoscopy is expensive, and it carries definite risks. For the present is seems wise to limit use of the procedure to patients who have solid indications.

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